



ENVIRONMENTAL
RESTORATION, LLC

ERRS REGION 5, CONTRACT EP-S5-09-05
SITE HEALTH AND SAFETY PLAN
ESI ENVIRONMENTAL
OCTOBER 20, 2010

SITE SAFETY PLAN AMENDMENT	
Amendment No.:	1
Site Name:	ESI Environmental
Date of Issue:	October 20 th 2010
Type of Amendment:	Confined Space Entry Addition
Reason for Amendment:	Additional tasks were added to the Work Plan
Alternate Safeguard Procedures:	Please refer to the attached Task Specific Safety Assessment / SOP Attached
Required Changes in PPE:	None

Vanda Simon 10/27/10
On-Scene Coordinator (Date)

R. B. W. 10/27/10
ER Response Manager (Date)

Shawn M. Pass 10/27/10
(Start) Site Leader (Date)

A/L (START) 4/6/11



TASK SPECIFIC SAFETY ASSESSMENT			
JOB TASK: CLEANING AND ENTRY OF TANKS & PITS			
PERSONAL PROTECTIVE EQUIPMENT: LEVEL C			
HAZARD	SOURCES	CONTROL MEASURES	
Corrosive/toxic liquids/sludges	Vats & drums	Saranex / Acid suits, nitrile gloves, & Supplied air respirator	
Burns/lacerations	Hotsy – Hot water pressure washer	Inspect Hotsy hose, do not point wand at other individuals, wand must be 36" in length; splash shield when not wearing respirator	
Noise	Equipment	Hearing protection for levels > 85 dBs	
Slips/Trips/Falls	Uneven Terrain Debris	Identify/mark hazards Remove debris from walking / working surfaces	
Ergonomics	Lifting and Bending	Proper lifting techniques / Buddy system	
Punctures	Sharp Objects	Beware of sharp objects / Wear leather gloves	
Cold Stress	Cold Temperatures PPE Usage	Follow HS-5 Cold Stress SOP	
Confined Space	Tanks/Sumps/Vaults	Avoid entry if possible / Follow H&S Procedures & SOP HS-6	



Doc. HS-5 COLD STRESS STANDARD OPERATING PROCEDURE

1.0 PURPOSE

Cold-related illness is a hazard of working outdoors in cold environments. This procedure describes requirements for preventing occupational injury and illness due cold stress. Use of this procedure complies with federal and state OSHA regulations in 29 CFR 1910 and 1926.

2.0 SCOPE

This procedure applies to all Environmental Restoration, LLC work operations involving ambient temperatures less than 40°F (4°C).

3.0 COLD STRESS CONSIDERATIONS

The body maintains its temperature by gaining heat from food metabolism and muscular work. The body's first defense against cold is constriction of blood vessels in the hands and feet, and shivering. If the body is unable to produce enough heat to maintain skin and core body temperature, the individual is at increased risk for cold stress disorders.

Environmental factors such as air velocity and moisture affect the amount of cold stress an individual experiences. Fatigue and personal factors such as weight, fitness and medical condition may influence a worker's risk of cold stress disorders.

4.0 COLD STRESS DISORDERS

4.1 Frostbite

Frostbite occurs when a body part receives inadequate heat from within the body. This allows freezing of the body tissues and fluids of that part. The most vulnerable parts of the body to frostbite are fingers, toes, cheeks, ears and nose. Frostbite can damage only the outer layers of skin or, in more severe conditions, deep into the body. Signs and symptoms of frostbite include pale skin (gray-yellow-white), pain and then numbness, stiffness and blisters.

At the first sign of altered feeling of the skin such as tingling, pain or numbness, workers should report to their supervisor and seek warming measures.

4.2 Hypothermia

Hypothermia can be life-threatening. It results from and the body's inability to maintain its core body temperature. Hypothermia can occur with prolonged work in cold environments, usually coupled with other predisposing factors such as smoking and overweight. The worker shivers uncontrollably and then stops shivering. The victim will have a subnormal body temperature, cool skin, slow breathing, weak pulse, listlessness, confusion, and pain in the extremities. The worker may die unless warmed promptly.

5.0 PREVENTION AND TREATMENT

5.1 Preventive Measures

Preventive measures for cold stress will be implemented when the ambient air temperature is less than 40 degrees Fahrenheit. Measures may be implemented at higher temperatures when moisture and wind increase the impact of cold stress. Preventive measures will reduce the risk of serious injury and loss of work productivity.

Environmental Restoration, LLC field associates will receive pre-employment and periodic medical examinations that include an evaluation of their ability to work under cold stress conditions.

Associates will use the buddy system, working in pairs or with at least one other person within their line of sight at all times.

5.2 Acclimatization

New associates or those unaccustomed to working under thermal stresses will be allowed to become acclimatized. During the first 7 days of work in a cold environment, their work load will be modified to begin at approximately 50 % of the expected work load, and is increased gradually each day. Associates can lose acclimatization in a few days. Those who have been away from the cold environment for more than four (4) days are allowed to re-acclimatize themselves as if they were new employees.

Employees are permitted to take rest breaks as often as necessary. However, all employees working under potential thermal stress conditions will take at least one 15-minute rest break every two hours, as a minimum. Work/rest cycles will be implemented for projects involving exposure to cold.

Warm protected break areas will be provided. Under extreme heat stress conditions, consideration will be given to working in the warmer times of the day (during sunshine). Vehicles and heavy-equipment cabs will be heated.

Workers will be instructed to wear adequate layered clothing for warmth, but not excessive to cause sweating. The use of heating devices such as radiant jets, hot plates and blowers may be implemented on a site-specific basis.

Workers will self-monitor for signs and symptoms of cold stress. Additional monitoring by health professionals for body temperature, peripheral pulse, respiratory rate and/or blood pressure will be considered under special circumstances.

Employees experiencing symptoms of cold stress will not be permitted return to work in potential cold stress conditions until they have been evaluated by a physician and released to return to work.



5.3 First Aid

Medical personnel and emergency transportation will be summoned immediately for any associate experiencing symptoms of hypothermia. The victim should sit or lie down. On-site first aid personnel will be summoned to evaluate victims of cold stress. If fully conscious, the associate will be encouraged to drink warm liquids and may be wrapped with warm blankets to promote warming. Associates may also be placed in a heated vehicle or trailer to facilitate warming.

Associates experiencing symptoms of cold stress such as pain in the extremities, lethargy, slurred speech, or intense shivering will immediately decontaminate, remove PPE, and move to a warm break area. Street clothing should be removed if it is wet. The victim will be wrapped in warm blankets.

Associates experiencing symptoms of cold stress will not be permitted return to work under potential cold stress conditions until they have been evaluated by a physician and released to return to work.

Hypothermia is an immediate life-threatening condition. The victim will be transported to the nearest medical treatment facility as quickly as possible. Environmental Restoration, LLC or personal vehicles may be used to transport victims from work sites where ambulance transport is not available or cannot respond within 5 minutes of a telephone call to emergency medical personnel.

6.0 TRAINING

Initial training is performed for new hires in a potentially exposed work assignment and during 40-hour hazardous waste operations safety training. These will include:

- How to identify potential cold stress situations,
- Signs and symptoms of cold stress disorders,
- First aid for cold illness and injuries,
- Cold stress prevention program,

Training topics will be reviewed during first aid/CPR classes and site-specific safety meetings. Copies of training documentation are maintained in the associate's safety and health training files.



Doc. HS-6

CONFINED SPACE ENTRY STANDARD OPERATING PROCEDURE

1.0 PURPOSE

This procedure describes minimum requirements for safe entry into confined spaces on Environmental Restoration, LLC job sites. Use of this procedure complies with federal and state OSHA regulations.

2.0 SCOPE

This procedure applies to all Environmental Restoration, LLC operations involving entry into confined spaces, including subcontractor activities. Subcontractors must have their own confined space entry program and procedures that comply with OSHA requirements and are at least as effective as this procedure.

Trenching and excavation operations are specifically excluded from this procedure. Those operations will be performed in accordance with Environmental Restoration, LLC Safety and Health Procedure and state and federal OSHA standards.

3.0 DEFINITIONS

Confined Space: Any enclosure with limited entrances and exits, that is not intended for human occupancy but is large enough for workers to enter and perform work. Confined spaces include, but are not limited to, tanks, process vessels, piping, bins, boilers, pits, sewers, ventilation and exhaust ducts, underground utility vaults, tunnels, manholes, pump lift stations and open top sumps.

Oxygen Deficiency: Oxygen content less than 19.5% by volume.

Lower Explosive Level (LEL): The minimum concentration of flammable gas or vapor, in air, that is required to produce an explosion and sustained fire. Concentrations below the LEL are too "lean" to support ignition.

Upper Explosive Level (UEL): The maximum concentration of flammable gas or vapor, in air, that will produce an explosion and sustained fire. Concentrations greater than the UEL are too "rich" to support ignition.

Immediately Dangerous to Life and Health (IDLH): In the event of respirator failure, the concentration that is likely to cause death, or immediate or delayed permanent adverse health effects, or prevent escape from such an environment. Severe eye irritation and breathing difficulty are examples of such symptoms. IDLH concentrations are determined by the National Institute for Occupational Safety and Health (NIOSH) to aid in respirator selection.

Permit-Required Confined Space: A confined space that has one or more of the following characteristics:

- May contain less than 19.5 % or more than 23.5 % oxygen,
- May contain flammable gas, vapor or dust at concentrations greater than 10% LEL,
- May contain an IDLH atmosphere,
- May contain toxic substances at concentrations greater than allowable occupational exposure limits,



- Contains or is connected to gases, liquids or solids that can flood the space and drown or smother workers inside,
- Is built with inward sloping walls, internal flanges or other structures that could trap or smother workers,
- Contains any other recognized safety or health hazard that could cause death, physical injuries, immediate serious illness, or prevent workers from escaping the space.

Environmental Restoration, LLC will treat all confined spaces as permit-required.

4.0 RESPONSIBILITIES

4.1 Project Supervisors

The project supervisor and site safety officer will identify confined spaces present at each Environmental Restoration, LLC work location. This activity will be performed during pre-bid site visits, prior to initial on-site operations, and at the start of any new work operations on-site. Identified confined spaces may include:

- Existing spaces, such as utility vaults or tanks,
- Spaces constructed during Environmental Restoration, LLC operations, such as well vaults, caissons, or leachate collection systems,
- Process equipment required for Environmental Restoration, LLC operations, such as temporary storage tanks and thermal treatment units,

The project supervisor will inform the site safety officer of the existence and location of confined spaces on-site as soon as they are identified.

Project supervisors with confined space training may issue and approve confined space entry permits.

4.2 Site Safety Officers

Site safety officers (SSOs) will issue and approve confined space entry permits. SSOs are responsible for maintaining permit records and for verifying that confined spaces are labeled with warning signs or equivalent identification. SSOs will also verify that site personnel and subcontractors are informed of the location of confined spaces in a timely manner, and are properly trained and equipped to perform confined space entries.

4.3 Entry Supervisors

Project supervisors, foremen, lead men and/or site safety officers acting as entry supervisors must have current confined space training in accordance with state and federal OSHA standards.

Entry supervisors are responsible for the following:

- Knowing the hazards of each confined space and work operation,

- Knowing the signs and symptoms of exposure to chemical and physical hazards within the confined space,
- Verifying the accuracy and completeness of entry permits,
- Determining whether conditions are acceptable for confined space entry,
- Overseeing entry operations,
- Terminating confined space entries if unsafe conditions or injuries occur.

4.4 Standby Observers (Attendants)

A standby observer or attendant is an individual stationed outside the confined space that monitors the authorized entrants (workers) inside. Site safety officers, foremen, lead men or other supervisory personnel may act as standby observers or attendants.

Standby observers must have current first aid and CPR training. Standby observers are responsible for the following tasks.

- Knowing the hazards of each confined space and work operation,
- Knowing the signs and symptoms of exposure to chemical and physical hazards within the confined space,
- Maintaining continuous visual or voice communications with workers inside the confined space,
- Remaining outside the confined space until relieved by another standby observer,
- Summoning emergency medical and rescue assistance,
- Notifying workers of the need to evacuate the confined space if unsafe conditions or injuries occur.

4.5 Authorized Entrants (Workers)

Authorized entrants are personnel who enter the confined space to perform work or rescue activities. They are responsible for complying with OSHA requirements for confined space entry and for responding to instructions from the standby observer, entry supervisor and emergency personnel.

Associates are prohibited from entering confined spaces for any reason for any length of time until they have received appropriate confined space training in accordance with this program.



5.0 IDENTIFICATION OF CONFINED SPACES

5.1 Site-Specific Health and Safety Plans

Confined spaces will be described in site-specific health and safety plans (SHSPs). A description of newly identified confined spaces will be added to the SHSP in a written amendment. The SHSP will also describe signs or other methods of recognizing confined spaces.

5.2 Personnel Information

Personnel will be informed of the existence and location of confined spaces during initial review of the SHSP. This information will be reviewed periodically during daily tailgate safety meetings. Personnel will be informed of newly identified confined spaces when the spaces are first recognized.

5.3 Signs

As soon as access to the confined space is available, a warning sign will be posted on the confined space. Signs will state, "DANGER - PERMIT REQUIRED CONFINED SPACE, DO NOT ENTER". Where posting signs is not feasible, alternative means of recognizing confined spaces will be provided and described in the SHSP.

6.0 POTENTIAL HAZARDS

Environmental Restoration, LLC operations may involve a wide variety of confined spaces. Potential hazards will be identified in SHSPs. These hazards may include any or all of the following:

- Oxygen deficiency or oxygen-rich atmosphere,
- Toxic dusts, mists, fumes, smoke, vapor and gas
- Flammable and explosive gases, liquids, vapors, and dusts,
- Inadequate access opening for entry/egress and internal obstructions hampering movement,
- Process machinery such as agitators, tumblers, crushers, mixing blades, screw conveyors, saws, etc,
- Liquid or solid materials that may engulf and smother personnel,
- Piping or feed lines containing hazardous chemicals, steam, water, gases, or other substances hazardous to health,
- Electrical devices such as plug-in lights, tools, or other portable equipment,
- Temperature extremes capable of causing heat or cold stress or burns,
- Pressurized lines containing hydraulic oil, gas, or other fluids,
- Inadequate illumination,
- Naturally occurring radioactive material (NORM) which can be found in storage tanks in the area of the Gulf of Mexico,
- Slippery surfaces.

7.0 CONTROL OF HAZARDS

Detailed control measures will be described in SHSPs. These will include lockout and tagout of utilities, process lines, backup power sources, air movers, and other hazardous energy sources that could engulf or injure personnel during confined space entries. They will also include air monitoring with direct-reading instruments for oxygen deficiency, flammable atmospheres, and toxic gases and vapors prior to confined space entry.

As a minimum, the following standard operating procedures will be applied to confined space entries.

7.1 Standby Observer

A trained stand-by observer is required for all confined space entries. The observer must be equipped with an air-supplied respirator and an air horn or other warning device to be used to summon emergency assistance. The observer must also be trained in first-aid and CPR.

Standby observers must be in continuous voice communication with personnel entering confined spaces. Such communication may be established by two-way radios or by voice provided that communications can be heard over noise caused by work activities inside the space. Specific communication measures will be described in the SHSP.

7.2 Emergency Alarms

In an emergency, the stand-by observer will sound the alarm. The observer is prohibited from entering the confined space for any reason, until and unless at least one other worker (properly trained and equipped) arrives on the scene to replace the observer.

7.3 Pre-Entry Air Monitoring

Confined spaces must be monitored by a trained worker before entry, for oxygen deficiency, flammable gases and vapors, and specific toxic gases and vapors suspected to be present. Specific monitoring procedures will be described in SHSPs.

- Direct-reading instruments and/or detector tubes (for specific gases and vapors) will be used for this testing.
- Direct-reading instruments must be calibrated daily by the SSO or other trained worker.

7.4 Action Levels and Prohibited Entry Conditions

Environmental Restoration, LLC prohibits confined space entry into the following atmospheres:

- Oxygen content $<19.5\%$ or $>21\%$;
- Flammable vapor readings $\geq 10\%$ LEL;
- IDLH concentrations of any chemical.

The source of these readings must be identified and removed or otherwise controlled. In addition, the confined space must be ventilated to bring oxygen levels to normal ambient concentrations and to remove flammables and IDLH atmospheres before personnel enter the space.

Site-specific action levels will be defined in the SHSP for other chemical contaminants identified in confined spaces.



7.5 Ventilation

Only clean air will be used for ventilating confined spaces. Personnel are prohibited from using oxygen gas for ventilation.

Ventilation equipment must be bonded and grounded prior to operation. The exhaust of the ventilation equipment must be located downwind and away from personnel, other equipment, and any potential ignition sources. Ventilation equipment must be positioned so that it does not block worker exits from the confined space.

Where mechanical ventilation is necessary, ventilation equipment must run continuously while personnel are inside the confined space. In addition, ongoing oxygen and toxic and flammable gas monitoring must be performed while the space is occupied.

7.6 Pre-Entry Lockout and Tagout

Tanks, piping, valves and sewers connected to the confined space must be isolated, locked out and tagged prior to personnel entering the space. This will prevent accidental release of hazardous materials into the space. Removal of spool pieces or valves and insertion of blanks may be required. Double block and bleed valves may need to be locked out and tagged before work begins. All moving parts inside the confined space must be physically blocked in place and locked out to prevent unexpected movement and personnel injury. (See Environmental Restoration, LLC Health and Safety Procedure.)

Mechanical and electrical energy control points and all potential ignition sources must be removed or locked out and tagged before work begins in the confined space. (See Environmental Restoration, LLC Health and Safety Procedure.)

7.7 Emergency Equipment

First-aid kits, fire extinguishers, and emergency rescue equipment must be present in the immediate work area and be in good operating condition before confined space entry begins. Eyewashes and safety showers are required if corrosive substances are involved in the work activities.

Persons entering confined spaces must wear body harnesses and lifelines to permit emergency rescue. A tripod and hoist (or other man-lifting devices) are required where workers must enter the space from above rather than from the side. Such devices must remain in place during the confined space entry to facilitate emergency rescue.

7.8 First Aid/CPR and Emergency Rescue

Where first-aid/CPR and emergency rescue are provided by Environmental Restoration, LLC personnel, those personnel must have hands-on training in these topics before confined space work begins and at least annually thereafter. Such training must include practice in performing rescues from confined spaces typically encountered at Environmental Restoration, LLC work sites and current certification in first aid/CPR. Personnel will perform a practice emergency drill at each site.

First-aid/CPR and emergency rescue may be provided by off-site emergency services if response time to the site is adequate. Off-site emergency services must be contacted prior to confined space entry work to arrange a site visit and opportunity for hands-on rescue practice in specific confined spaces.



7.9 Electrical Equipment and Lighting

Electrical equipment used in confined spaces must be heavy duty and be properly grounded. If any flammable vapors are detected in the space, intrinsically safe or explosion-proof equipment is required.

Heavy duty, flexible electric cords with good insulation and connectors will be used. No splices are permitted. Cracked or worn insulation will be replaced.

Non-double insulated equipment will be run through a GFCI.

Lighting will not be suspended by electrical cords unless it is specifically designed for that purpose.

Generators will be grounded.

7.10 Hot Work Permits

A Hot Work permit is required for burning, welding, cutting or other hot work activity inside a confined space. This includes spark-generating activities and those that may produce hot surfaces. (See Environmental Restoration, LLC Health and Safety Procedure.)

7.11 Welding, Cutting, or Burning

Mechanical exhaust ventilation is required when burning, welding or torch cutting are performed in a confined space. Ventilation flow rates must be high enough to remove metal fume, gases, and vapors generated by these activities. A local exhaust hose placed as close as possible to the hot work is the preferred method of ventilation for such work.

Welding gas leaks can result in serious fire and explosion hazards in confined spaces. Compressed gas cylinders (other than breathing air) are prohibited in confined spaces. Attached welding gas hoses must be long enough to reach the work location inside the confined space.

Welding gases must be shut off at the cylinders, outside the confined space, when not in use. Welding torches and hoses must be removed from the confined space when not in use. Open end fuel gas and oxygen hoses must be immediately removed from the confined space when they are disconnected from the torch. Such hoses may contain sufficient residual gas to cause fires and explosions if ignited.

8.0 CONFINED SPACE ENTRY PERMITS

Environmental Restoration, LLC will treat all confined spaces as "permit-required". A completed, signed Confined Space Entry permit is required before work begins and before anyone enters a confined space.

8.1 Duration

Confined Space Entry permits are valid **ONLY** for the date and time period listed on the permit, and never for longer than a single shift.

- The maximum time period for permits is one 8-hour work shift.
- If work is interrupted for 1 hour or more, a new permit must be completed and signed.
- If a worker becomes ill within a confined space or after a confined space entry, the space must be evacuated and re-entry is prohibited until additional air monitoring is performed. In such cases, a new permit is required prior to re-entry.



8.2 Required Signatures

Confined Space Entry permits must be signed by the site safety officer (SSO), the standby observer, the work crew supervisor and every worker who enters the space. If someone other than the SSO performs required air monitoring, that worker must also sign the permit.

8.3 Standby Observer Requirement

The Site Safety Officer or another properly trained and equipped worker must function as the standby observer. The standby observer will have no other duties during confined space entries.

8.4 Posting Permits and Recordkeeping

Confined Space Entry permits must be attached to the entrance, to the space or be conspicuously posted in the immediate work area.

When confined space work is completed, the permit must be placed in the project file and retained for at least one year or the duration of the project, whichever is longer.

9.0 TRAINING

9.1 Training Frequency and Content

Personnel must be trained in confined space entry procedures before participating in such operations. Training must include at least the following subjects:

- Definition of confined spaces, oxygen deficiency, LEL, UEL, and IDLH,
- Air monitoring requirements for confined space entry,
- Limitations, use and maintenance of air monitoring devices,
- Use and maintenance of ventilation equipment,
- Use and maintenance of respiratory equipment,
- Procedures for obtaining and using Confined Space Entry permits,
- Chemical and physical hazards associated with confined spaces,
- Standby observer's responsibilities,
- Communication procedures,
- Limitations, use and maintenance of body harnesses, lifelines and emergency rescue equipment,
- Emergency response procedures for confined space entries.

Training must be repeated at least annually.



9.2 Training Sources

Training will be presented by the Environmental Restoration, LLC Health and Safety staff or other qualified trainers approved by the Safety Committee.

9.3 Documentation

Documentation of training must be included in the associate training files at Environmental Restoration's office.

<div style="display: flex; justify-content: space-between;"> CONFINED SPACE ENTRY PERMIT <div> Date Issued _____ Expires _____ </div> </div>	
NOTE	IN THE EVENT OF AN EMERGENCY, CALL 911
NOTE	IF THE CONDITIONS OR PROCEDURES SPECIFIED ON THIS PERMIT CHANGE, STOP WORK IMMEDIATELY AND NOTIFY THE SAFETY OFFICE.
PARTY HAZARD ASSESSMENT (To be filled out by the Entry Supervisor)	
Confined space identification number	Location of confined space
Description of confined space	
Description of work to be performed	
Materials or chemicals located and /or brought into the confined space (MSDS's must be posted)	
Equipment located or to be brought into the confined space	
<div> CHECK ALL POTENTIAL HAZARDS (Check all inherent and introduced hazards) <div style="display: flex; justify-content: space-between; margin-top: 5px;"> <div style="width: 30%;"> <u>Hazardous Atmospheres</u> <input type="checkbox"/> Flammable <input type="checkbox"/> Toxic <input type="checkbox"/> Irritant <input type="checkbox"/> Corrosive <input type="checkbox"/> Oxygen -Deficient <input type="checkbox"/> Oxygen -Enriched <input type="checkbox"/> Other (List) _____ </div> <div style="width: 30%;"> <u>Physical Hazards</u> <input type="checkbox"/> Temperature <input type="checkbox"/> Chemical Absorption <input type="checkbox"/> Noise <input type="checkbox"/> Entrapment <input type="checkbox"/> Vibration <input type="checkbox"/> Electrical Equip. <input type="checkbox"/> Mechanical Equip. </div> <div style="width: 30%;"> <input type="checkbox"/> Spark-producing operations <input type="checkbox"/> Spilled Liquids <input type="checkbox"/> Engulfment <input type="checkbox"/> Radiation <input type="checkbox"/> Entry and Exit Limitations </div> <div style="width: 10%;"> <u>Other Anticipated Hazards</u> (describe below) _____ </div> </div> </div>	
PART 2- HAZARD CONTROLS (To be filled out by Entry Supervisor)	
<input type="checkbox"/> Yes <input type="checkbox"/> No Is lockout/tagout required? List isolation points: _____	
<input type="checkbox"/> Yes <input type="checkbox"/> No Are GFCI's required on all electrical power? <input type="checkbox"/> Yes <input type="checkbox"/> No Is explosion-proof equipment required? <input type="checkbox"/> Yes <input type="checkbox"/> No Are barriers required? <input type="checkbox"/> Yes <input type="checkbox"/> No Is communication equipment required? <input type="checkbox"/> Yes <input type="checkbox"/> No Is telephone or 2-way radio for summoning rescue available? Check required emergency equipment: <div style="display: flex; justify-content: space-between;"> <div> <input type="checkbox"/> Fire Extinguisher (type?) _____ <input type="checkbox"/> Emergency Shower : Eyewash <input type="checkbox"/> Safety Harness </div> <div> <input type="checkbox"/> Life Line Retrieval Line <input type="checkbox"/> Tripod and Winch (for 5+ ft. vertical) <input type="checkbox"/> Other (specify) _____ </div> </div>	
<input type="checkbox"/> Yes <input type="checkbox"/> No Are MSDS's for all materials in the confined space (or to be brought into the confined space) attached? <input type="checkbox"/> Yes <input type="checkbox"/> No Have entrants and standby personnel been trained? <input type="checkbox"/> Yes <input type="checkbox"/> No Has the standby person been informed to remain continuously posted outside the confined space?	
Special entry and/or work procedures? _____	
List required Personal Protective Equipment _____	

PART 3- PERMIT REVIEW

- ☐ Yes ☐ No Has appropriate air monitoring been identified?
☐ Yes ☐ No Are respirators required? List types:
☐ Yes ☐ No Are hazard controls and PPE appropriate and adequate?
☐ Yes ☐ No Has SAO approved the Operating Procedure?
☐ Yes ☐ No Is continuous air monitoring required?

Describe any special
entry requirements:

Permit

Approved:

Safety

Assurance

Office:

Name

Phone

Signature

Date

PART 4- AIR SAMPLING RESULTS

Air Monitoring Equipment used:

Model	Serial Number	Date Calibrated	User's Name

Air Monitoring Results (to be conducted at various areas throughout)

Date	Time	Location(s)	Oxygen, % (19.5-23.5%)	Combustibles, % LEL (0-10% of LEL)	H2S	CO	Toxic Chemicals

Has all required air monitoring been done throughout the confined space? Test done by

PART 5- LIST ALL AUTHORIZED ENTRANTS AND STANDBY PERSONNEL
(completed by the Entry Supervisor and initiated by Entrants and Standby Personnel)

Entrants	Signature	Standby Personnel	Signature

PART 6- CERTIFICATION (Entrants and Standby Personnel shall review the permit and Operating Procedure.
After this is done they shall sign the permit next to their names in Part 5.)

I certify that the requirements of this permit have been met.

ENTRY

SUPERVISOR Name

Signature

Date

Phone

Organization

Name

Signature

Date

Phone

Organization

When confined space entry work is completed send this permit to the
Safety Office.